

DETAILED ACTION

This application has been examined. Claims 4, 8-9, 11-16, 20, 24-25, 27-28, 32, 36-37, 54, 58-61 are pending. Claims 1-3, 5-7, 10, 17-19, 21-23, 26, 29-31, 33-35, 38-53, 55-57 are cancelled. Claims 59-61 are submitted as new claims.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 4, 16, 20, 28, 59 recite a limitation for '*separately storing a plurality of other addresses that are dedicated for assignment to the information- processing device based on a status of the information- processing device as a callee during initiation of tunnel communication*'.

The Applicant Remarks cite Figure 15b Page 48 providing support for said limitation. Upon inspection of the cited portions of the Applicant Specification the Examiner does not find sufficient guidance regarding the said separate tables for callee Addresses (originator) and called party addresses (destination). The cited portions appear to indicate a singular table for all available host address.

The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

Priority

This application claims benefits of priority from Foreign Application
2004-022902 filed January 30, 2004. (JAPAN)

The effective date of the claims described in this application is January 30, 2004.

Response to Arguments

Applicant's arguments filed 05/18/2011 have been fully considered but they are not persuasive.

The Applicant presents the following argument(s) [*in italics*]:

...[in Peles] *For communications taking place using tunnel 12 in Table 1 of Peles, the tunnel address of the local information-processing device will always be 100.1.1.1, and will not change dependent upon whether that information-processing device is the caller or callee...*

The Examiner respectfully disagrees with the Applicant.

Peles Paragraph 42, Table 1, Table 2 disclosed wherein a device stores a table of predetermined address. Table 1 indicates available plurality of addresses for the Local Station that is equivalent to the caller device. Table 2 indicates available plurality of addresses for the Remote Station that is equivalent to the callee device. Peles selects an address for the caller and callee device to use for tunnel communications. Furthermore Peles Paragraph 55 enables the caller and callee devices to select

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different tunnels for the remainder of the packets of the connection, such that messages of a single connection are spread across multiple tunnels. This offers better security and better balancing of the traffic load between the tunnels.

The Examiner notes that in context of caller/callee endpoint designations each endpoint can only be either a callee or caller at any point in time during the entire duration of any given tunnel connection.

The Examiner notes that Peles disclosed a plurality tunnels between In view of the suggestion by Peles to *select different tunnels for the remainder of the packets of the connection* it would have been obvious to a person of ordinary skill in the networking art to implement a full-duplex communication using 2 uni-directional tunnels wherein each uni-directional tunnel transmits data from caller to callee only. Thus for Local Station device acting as a callee device (receiving inbound traffic) on uni-directional Tunnel 12 will have Tunnel Address 100.1.1.1 while Local Station acting as a caller device (transmitting outbound traffic) on uni-directional Tunnel 21 will have Tunnel Address 200.1.1.1.

Verma-Peles disclosed (re. Claim 59) wherein the address determination part returns a caller address selected from among the plurality of addresses and includes the caller address in the encapsulated communication target data during said initiation of the first tunnel communication based on the source signal transmitted by the judgment part, (Peles- *Local Station device acting as a callee device (receiving inbound traffic) on uni-directional Tunnel 12 will have Tunnel Address 100.1.1.1*) and returns a callee address selected from among the plurality of other addresses and includes the

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callee address in the encapsulated communication target data during said initiation of the second tunnel communication based on the destination signal transmitted by the judgment part. (*Peles- Local Station acting as a caller device (transmitting outbound traffic) on uni-directional Tunnel 21 will have Tunnel Address 200.1.1.1.*)

The Applicant presents the following argument(s) [*in italics*]:

The logic appears to be that since Verma teaches conventional methods of selecting addresses, Verma's scope should be expanded to teach other, non-disclosed methods as well. Applicants respectfully submit that such logic, if upheld, would improperly expand the teachings of Verma to teach every type of address selection technique, no matter how complex and sophisticated, simply because Verma teaches a conventional technique. The prior art must provide more than just a possibility. There must be some articulated reasoning to support the conclusion of obviousness.

The Examiner respectfully disagrees with the Applicant.

Peles disclosed a method of selecting addresses that is different from *conventional methods such as by placing a DNS call.*

The Examiner notes that the method of using a look-up table for determining an address such as disclosed by the Applicant's claimed invention is also a conventional method. The Examiner does not detect any unconventional methods for determining an address in the claimed invention. Furthermore Peles also disclosed using a look-up table for determining an address. The Examiner does not detect any detect any

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distinction between the Applicant claimed invention and Peles with respect to the method of selecting an address.

The Applicant presents the following argument(s) [*in italics*]:

...[the Examiner] interpretation fails to observe that the same caller address, for example, is assigned to the caller in two different tunnel communications involving different sets of information-processing devices.

The Examiner respectfully disagrees with the Applicant.

The Applicant remarks appear to be describing wherein the *two different tunnel communications* are occurring simultaneously. The Examiner notes there is nothing in the claim language or in the Applicant Specification that suggests that a caller is able to conduct *two different tunnel communications* simultaneously.

The Examiner respectfully requests the Applicant to clarify these remarks.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 8-9, 16, 20, 24-25, 27-28, 54, 59-61 rejected under 35 U.S.C. 103(a) as being unpatentable over Verma (US Patent 6614809) in view of Peles (US Patent 2004/0236855) further in view of what was well-known in the networking art.

Verma disclosed wherein a tunnel media translator receives, stores, and maps both source device tunnel information and destination device tunnel information to each other in order to effect the tunnel communication. The translator maps an IP address and UDP port of an IP link to a virtual path identifier (VPI) and virtual channel identifier (VCI) for an ATM network. The ATM network address may be determined dynamically for each source and destination device. In order to obtain a network address on the ATM network, tunnel media translator 440 will send a host name resolution (HNR) call, which operates in a manner similar to a DNS call, that contains the host name value. In response to the HNR call, the host name server 474 returns a HNR reply that contains a network address that corresponds to the host name or system identifier in the HNR call.

Verma disclosed (re. Claim 4) an information-processing device for a communication source that performs tunnel communication with a communication destination device, comprising:

a tunnel communication part including a network interface for communicating with a server via a communication line of a communication network, wherein the tunnel communication part acquires an identifier and an IP address of a communication destination device from the server (Verma-Column 7 Lines 35-45, destination tunnel endpoint 150 *inserts its own address and tunnel identifier into the SCCRP connection reply message*) and then performs the tunnel communication over the communication

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network with encapsulated communication target data;(Verma-Column 4 Lines 15-45)

a judgment part for determining whether the information-processing device is to be the source of the tunnel communication or a destination of the tunnel communication in each of the tunnel communications; (Verma-Column 8 Lines 30-45) and

an address determination part including a computer-readable memory storing a relationship that returns a caller address (Verma- 'the host name server 474 returns a HNR reply that contains a network address that corresponds to the host name or system identifier in the HNR call ') between a caller address to be included in the encapsulated communication target data when the information-processing device is identified as the source by the judgment part and a callee address to be included in the encapsulated communication target data when the information-processing device is identified as the destination by the judgment part , wherein the caller address is different from the called address, wherein the address determination part selects the caller address for the information-processing device when the information-processing device is the source and the callee address for the information-processing device when the information-processing device is the destination to be included in the communication target data according to the relationship based at least in part on the determination by the judgment part. (Verma-figure 7a,Column 4 Lines 35-55, Column 6 Lines 15-35)

While Verma does not explicitly disclose distinguishing between a caller or callee it would have been obvious to a person of ordinary skill in the networking art that a remote client that originates the tunnel request is a caller, and the responding entity on

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the second network is a callee and that Verma is able to distinguish between the caller and callee.

Verma Column 6 Lines 10-35, Column 9 Lines 35-45 distinguishes between caller (tunnel initiator) and callee (tunnel endpoint). Further Verma disclosed a table for storing relationships between endpoints and their network addresses. Verma uses the network address returned by the host name server in translating the tunnel packets without de-tunneling or re-tunneling the packets.

While Verma disclosed an address determination part for providing caller and callee address, Verma did not disclose a plurality of predetermined addresses available to be selected for caller and callee.

While Verma substantially disclosed the claimed invention Verma did not disclose (re. Claim 1) wherein the address determination part determines the address used for the communication target data by selecting from a plurality of predetermined addresses available to be selected as the caller address and a plurality of additional predetermined addresses available to be selected by the address determination part as the callee address, and the address determination part determines at least one of the caller address and the callee address from among the plurality of the predetermined addresses and the plurality of additional predetermined addresses to be included in the communication target data.

Peles Paragraph 42, Table 1, Table 2 disclosed wherein a device stores a table of predetermined address. Table 1 indicates available addresses for the Local Station

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that is equivalent to the caller device. Table 2 indicates available addresses for the Remote Station that is equivalent to the callee device.

Peles disclosed (re. Claim 1) wherein the address determination part determines the address used for the communication target data by selecting from a plurality of predetermined addresses (Peles-*Local Station, being the caller, is assigned a tunnel address from Table 1) available to be selected as the caller address* and a plurality of additional predetermined addresses available to be selected by the address determination part as the callee address, (Peles-*Remote Station, being the callee, is assigned a tunnel address from Table 2)* and the address determination part determines at least one of the caller address and the callee address from among the plurality of the predetermined addresses and the plurality of additional predetermined addresses to be included in the communication target data.(Peles-Paragraph 44)

Verma and Peles are analogous art because they present concepts and practices regarding establishment of tunnel communications. At the time of the invention it would have been obvious to combine Peles into Verma. The motivation for said combination would have been to enable the caller and callee devices to select different tunnels for the remainder of the packets of the connection, such that messages of a single connection are spread across multiple tunnels. This offers better security and better balancing of the traffic load between the tunnels. (Peles-Paragraph 55)

Claims 16, 28 (re. system) is rejected on the same basis as Claim 4.

Claim 20 (re. server) is rejected on the same basis as Claim 4.

The motivation to combine described in Claim 4 applies to Claims 16,28,and 20.

Claim 59 (re. device) is rejected on the same basis as Claim 4.

The Examiner notes that Peles disclosed a plurality tunnels between In view of the suggestion by Peles to *select different tunnels for the remainder of the packets of the connection* it would have been obvious to a person of ordinary skill in the networking art to implement a full-duplex communication using 2 uni-directional tunnels wherein each uni-directional tunnel transmits data from caller to callee only. Thus for Local Station device acting as a callee device (receiving inbound traffic) Tunnel 12 will have Tunnel Address 100.1.1.1 while Local Station acting as a caller device (transmitting outbound traffic) Tunnel 21 will have Tunnel Address 200.1.1.1.

Furthermore Verma-Peles disclosed (re. Claim 59) the address determination part returns a caller address selected from among the plurality of addresses and includes the caller address in the encapsulated communication target data during said initiation of the first tunnel communication based on the source signal transmitted by the judgment part, (Peles- *Local Station device acting as a callee device (receiving inbound traffic) on uni-directional Tunnel 12 will have Tunnel Address 100.1.1.1*) and returns a callee address selected from among the plurality of other addresses and includes the callee address in the encapsulated communication target data during said initiation of the second tunnel communication based on the destination signal transmitted by the judgment part. (Peles- *Local Station acting as a caller device (transmitting outbound traffic) on uni-directional Tunnel 21 will have Tunnel Address 200.1.1.1.*)

Verma-Peles disclosed (re. Claim 8,24) a tunnel communication identifier acceptor for accepting a tunnel communication identifier for identifying the tunnel communication; wherein the address determination part determines an address used for the communication target data, according to the determination by the judgment part and the tunnel communication identifier. (Verma-Column 7 Lines 35-55)

The motivation to combine described in Claim 4 applies to Claims 8,24.

Verma-Peles disclosed (re. Claim 9,25) wherein the address determination part determines a part of the address used for the communication target data according to the tunnel communication identifier, and determines another part of the address used for the communication target data according to the determination by the judgment part. (Verma-Column 6 Lines 35 thru Column 7 Lines 55)

The motivation to combine described in Claim 4 applies to Claims 9,25.

Verma-Peles disclosed (re. Claim 27) wherein the address output part transmits the first address and the second address to the first information-processing device and the second information-processing device. (Verma-Column 6 Lines 35 thru Column 7 Lines 55)

The motivation to combine described in Claim 4 applies to Claims 27.

Verma-Peles disclosed (re. Claim 54) wherein the relationship includes a function that determines at least one of the caller address and the callee address as a function of a variable established by the signal from the judgment part. (Verma-Column 9 Lines 60 thru Column 10 Lines 5, '*host name resolution call*'))

Verma-Peles disclosed (re. Claim 60,61) wherein said initiation of the tunnel communication comprises establishing a tunnel to be utilized for the tunnel communication involving the information-processing device. (Verma-Column 8 Lines 30-45, *a tunnel media translator receives, stores, and maps both source device tunnel information and destination device tunnel information to each other in order to effect the tunnel communication*)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-15,32,36,37,58 rejected under 35 U.S.C. 103(a) as being unpatentable over Verma (US Patent 6614809) in view of Peles (US Patent 2004/0236855) in view of Keane (US Patent 7395354).

Verma disclosed wherein a tunnel media translator receives, stores, and maps both source device tunnel information and destination device tunnel information to each other in order to effect the tunnel communication. The translator maps an IP address and UDP port of an IP link to a virtual path identifier (VPI) and virtual channel identifier (VCI) for an ATM network. The ATM network address may be determined dynamically

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for each source and destination device. In order to obtain a network address on the ATM network, tunnel media translator 440 will send a host name resolution (HNR) call, which operates in a manner similar to a DNS call, that contains the host name value. In response to the HNR call, the host name server 474 returns a HNR reply that contains a network address that corresponds to the host name or system identifier in the HNR call.

Verma-Peles (re. Claim 32) substantially disclosed the claimed invention as described in the rejection for Claim 1.

Furthermore Verma-Peles disclosed (re. Claim 32) *a plurality of different tunnel communication, and defining a relationship for each tunnel communication. (Peles- Paragraph 42, Table 1, Table 2, disclosed wherein a device stores a table of predetermined address. Table 1 indicates available addresses for the Local Station that is equivalent to the caller device. Table 2 indicates available addresses for the Remote Station that is equivalent to the callee device.)*

While Verma-Peles substantially disclosed the claimed invention Verma-Peles did not disclose (re. Claim 32) *wherein at least one of the caller address and the callee address is to be used for different information-processing devices involved in a plurality of tunnel communications.*

The Examiner interprets the above limitation in Claim 32 to indicate that caller and callee devices as distinct devices but using the same address.

While Verma-Peles substantially disclosed the claimed invention Verma-Peles did not disclose (re. Claim 11) a detection part for detecting whether two or more addresses used for the communication target data are the same in the two or more tunnel communications; and an address changing part for changing at least one of the addresses used for the communication target data if the detection part detects that two or more addresses are the same.

Keane disclosed (re. Claim 32) wherein at least one of the caller address and the callee address is to be used for different information-processing devices involved in a plurality of tunnel communications. (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

The Examiner notes that Peles also disclosed wherein at least one of the caller address and the callee address is to be used for different information-processing devices involved in a plurality of tunnel communications.

Keane disclosed (re. Claim 11) a detection part for detecting whether two or more addresses used for the communication target data are the same in the two or more tunnel communications; (Keane-Column 8 Lines 25 thru Column 9 Lines 25) and an address changing part for changing at least one of the addresses used for the communication target data if the detection part detects that two or more addresses are the same. (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

Verma,Peles and Keane are analogous art because they present concepts and practices regarding establishment of tunnels and tunnel identifiers. At the time of the invention it would have been obvious to combine Keane into Verma. The motivation for said combination would have been to enable a less cumbersome approach for resolving

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address conflicts in networks. (Keane-Column 2 Lines 15-25)

Verma-Peles-Keane disclosed (re. Claim 12) an address change information receiver for receiving address change information including information related to an address change; (Keane-Column 8 Lines 25 thru Column 9 Lines 25) and an address changing part for changing the address used for the communication target data, according to the address change information. (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

The motivation to combine described in Claim 11 applies to Claims 12.

Verma-Peles-Keane disclosed (re. Claim 13) a detection part for detecting whether two or more addresses that are used for the communication target data are the same in the two or more tunnel communications; (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

an address agreement information transmitter for transmitting address agreement information showing that addresses are the same if the detection part detects that two or more addresses are the same; (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

an address change information receiver for receiving address change information including information related to address change; (Keane-Column 8 Lines 25 thru Column 9 Lines 25) and

an address changing part for changing the address used for the communication target data according to the address change information. (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

The motivation to combine described in Claim 11 applies to Claims 13.

Verma-Peles-Keane disclosed (re. Claim Claim 14) an address output part for outputting the address determined by the address determination part. (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

The motivation to combine described in Claim 11 applies to Claims 14.

Verma-Peles-Keane disclosed (re. Claim 15) wherein the address output part transmits the address determined by the address determination part. (Keane-Column 8 Lines 25 thru Column 9 Lines 25)

The motivation to combine described in Claim 11 applies to Claims 15.

Verma-Peles-Keane disclosed (re. Claim 36,37) a tunnel communication identifier acceptor for accepting a tunnel communication identifier for identifying the tunnel communication; wherein the address determination part determines an address used for the communication target data, according to the determination by the judgment part and the tunnel communication identifier. (Verma-Column 7 Lines 35-55)

The motivation to combine described in Claim 32 applies to Claims 36,37.

Verma-Peles-Keane disclosed (re. Claim 58) a comparison of a least significant digit of a communication destination device identifier to a least significant digit of a communication source device identifier. (Keane-Column 8 Lines 55-65, *the process of determining conflicting addresses involves comparing the device addresses, said comparison inherently involving all the digits of the address information including the least significant bit*)

The motivation to combine described in Claim 32 applies to Claim 58.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG C. BENGZON whose telephone number is (571)272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Pappas can be reached on (571)272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GREG C BENGZON/
Primary Examiner, Art Unit 2444